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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Chaves et al.

Serial No.: 10/816,228

Filed: 3/31/2004

Title: OPTICAL DEVICE FOR LED-BASED LAMP

Attorney Docket No.: 3084.028

Group Art Unit:  
2872  
Examiner:

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**INFORMATION DISCLOSURE STATEMENT**

Dear Sir:

This Information Disclosure Statement is submitted:

- ☒ under 37 CFR 1.97(b), or  
(Within three months of filing national application; or date of entry of international application; or before mailing date of first office action on the merits; whichever occurs last)
- ☐ under 37 CFR 1.97(c) together with either a:  
☐ Statement under 37 CFR 1.97(e), or  
☐ a \$180.00 fee under 37 CFR 1.17(p), or  
(After the CFR 1.97(b) time period, but before final action or notice of allowance, whichever occurs first)
- ☐ under 37 CFR 1.97(d) together with a:  
☐ Statement under 37 CFR 1.97(e), and  
☐ a \$180.00 fee set forth in 37 CFR 1.17(p).  
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☒ Applicant(s) submit herewith Form PTO/SB/08A and PTO/SB/08B Information Disclosure Citation together with copies, of patents, publications or other information of which applicant(s) are aware, which applicant(s) believe(s) may be material to the examination of this application and for which there may be a duty to disclose in accordance with 37 CFR 1.56.

The items listed on PTO/SB/08A and PTO/SB/08B are either in the English language or an English translation is provided, therefore, no further explanation is required, with the exception of the following non-English reference. A concise explanation, as presently understood, is as follows:

SU 1282051 A1 appears to be related to a luminous energy collimator having a paraboloid axis inclined at angle towards symmetry axis.

ES 2142752 appears to describe an axisymmetrical aspherical lens for coupling four normal congruencies of rays, two by two. It is composed by two focusing asphericals without revolution symmetry that transform two normal congruencies of rays.

Applicant submits that the above references taken alone or in combination neither anticipates nor renders obvious the present invention. Consideration of the foregoing in relation to this application is respectfully requested.

It is requested that the information disclosed herein be made of record in this application

Respectfully submitted,

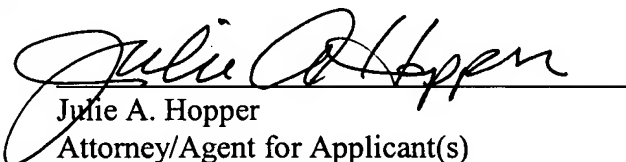
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SINSHEIMER, SCHIEBELHUT &  
BAGGETT

Date of Deposit: Oct 25 2004

Typed Name: Julie A. Hopper

Signature: 

  
Julie A. Hopper  
Attorney/Agent for Applicant(s)

Reg. No. 50869

Date: Oct. 25 2004

Telephone No.: (805) 781-2824



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|   |   |    |   | Application Number       | 10/816,228    |
|   |   |    |   | Filing Date              | 3/31/2004     |
|   |   |    |   | First Named Inventor     | Chaves et al. |
|   |   |    |   | Art Unit                 | 2872          |
|   |   |    |   | Examiner Name            |               |
| Sheet   | 1 | of | 2 | Attorney Docket Number   | 3084.028      |

| U.S. PATENT DOCUMENTS |                          |  |                                |  |   |
|-----------------------|--------------------------|--|--------------------------------|--|---|
| Examiner<br>Initials* | Cite<br>No. <sup>1</sup> | Document Number                            | Publication Date<br>MM-DD-YYYY | Name of Patentee or<br>Applicant of Cited Document | Pages, Columns, Lines, Where<br>Relevant Passages or Relevant<br>Figures Appear |
|                       |                          | Number - Kind Code <sup>2</sup> (if known) |                                |  |   |
|                       |                          | USSN 10/461,557                            | 06-12-2003                     | Minano   |   |
|                       |                          | USSN 10/772,088                            | 02-03-2004                     | Minano   |   |
|                       |                          | USSN 10/779,259                            | 02-13-2004                     | Benitez  |   |
|                       |                          | USSN 10/903,925                            | 07-29-2004                     | Falcoff  |   |
|                       |                          | USSN 10/901,919                            | 07-28-2004                     | Benitez  |   |
|                       |                          | USSN 10/880,386                            | 06-28-2004                     | Benitez  |   |

| FOREIGN PATENT DOCUMENTS |                          |   |                                |  |   |                |
|--------------------------|--------------------------|---|--------------------------------|--|---|----------------|
| Examiner<br>Initials*    | Cite<br>No. <sup>1</sup> | Foreign Patent Document   | Publication Date<br>MM-DD-YYYY | Name of Patentee or<br>Applicant of Cited Document | Pages, Columns, Lines,<br>Where Relevant Passages<br>or Relevant Figures Appear | T <sup>6</sup> |
|                          |                          | Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> (if known) |                                |  |   |                |
|                          |                          | SU 1282051 A1   | 01/07/1987                     | Spigulis   |   |                |
|                          |                          | EP 0 450 560 A2   | 10/09/1991                     | Totah, et al                                       |   |                |
|                          |                          | ES 2142752  | 12/01/2000                     | Universidad<br>Politecnica de<br>Madrid            |   |                |
|                          |                          | WO 99/09349   | 02/25/1999                     | De Coma<br>International Inc.                      |   |                |
|                          |                          | WO 99/13266   | 03/18/1999                     | Simon  |   |                |
|                          |                          | WO 01/07828 A1  | 02/01/2001                     | Pelka  |   |                |
|                          |                          | WO 03/066374 A2   | 08/14/2003                     | Steen, et al                                       |   |                |
|                          |                          | WO 03/066374 A3   | 08/14/2003                     | Steen  |   |                |
|                          |                          | WO 04/007241 A2   | 01/22/2004                     | Steen, et al                                       |   |                |

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|-----------------------|--|--------------------|--|
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|   |   |           | <b>Application Number</b>   | 10/816,228                    |          |
|   |   |           | <b>Filing Date</b>          | 3/31/2004                     |          |
|   |   |           | <b>First Named Inventor</b> | Chaves et al.                 |          |
|   |   |           | <b>Art Unit</b>             | 2872                          |          |
| <b>Examiner Name</b>  |   |           |                             |                               |          |
| <b>Sheet</b>  | 2 | <b>of</b> | 2                           | <b>Attorney Docket Number</b> | 3084.028 |

| NON PATENT LITERATURE DOCUMENTS |          |   |                |
|---------------------------------|----------|---|----------------|
| Examiner Initials*              | Cite No. | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T <sup>2</sup> |
|                                 |          | Remillard, Everson and Weber, "Loss Mechanisms Optical Light Pipes" <i>Applied Optics</i> Vol 31 #34 pp. 7232-7241 December 1992.   |                |
|                                 |          | Parkyn et al "The Black Hole™: Cusped waveguide-injectors and illuminators for LEDs; Part of the SPIE Conference on Nonimaging Optics: Maximum Efficiency Light Transfer V, Denver, CO, July 1999.  |                |
|                                 |          | Hyper ARGUS®LED, Hyper-Bright, 3mm (T1) LED, Non Diffused; 3-1-2000; Infineon Technologies, pp. 1-9.  |                |
|                                 |          | Spigulis, "Compact dielectric reflective elements, Half-sphere concentrators of radially emitted light" <i>Applied Optics</i> Vol. 33, No. 25, September 1994.  |                |
|                                 |          | International Search Report, PCT/US03/32076   |                |
|                                 |          | Benítez, P. "Chapter 6: The SMS design method in three dimensions", from <i>Conceptos avanzados de óptica anidólica: diseño y fabricación</i> , PhD dissertation, UPM, (1998).  |                |
|                                 |          | Benítez, P.; Mohedano, R.; Minano, J. "Design in 3D geometry with the Simultaneous Multiple Surface design method of Nonimaging Optics" Instituto de Energía Solar, E.T.S.I. Telecomunicación, Universidad Politécnica, 28040. Madrid, Spain. (July 1999).      |                |
|                                 |          | International Search Report. PCT/US03/38240, July 26, 2004.   |                |

|                           |  |                        |  |
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| <b>Examiner Signature</b> |  | <b>Date Considered</b> |  |
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| <b>TRANSMITTAL FORM</b><br><i>(to be used for all correspondence after initial filing)</i> | Application Number   | 10/816,228             |          |
|  | Filing Date          | Mar 31, 2004           |          |
|  | First Named Inventor | Chaves, Julio Cesar    |          |
|  | Art Unit             | 2872                   |          |
|  | Examiner Name        |                        |          |
| Total Number of Pages in This Submission   | 5*                   | Attorney Docket Number | 3084.028 |

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|--|--|
| Firm or Individual name                    | SINSHEIMER, SCHIEBELHUT & BAGGETT Julie A. Hopper (Reg. No. 50869) |
| Signature                                  |  |
| Date                                       | Oct. 25 2004   |

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